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Boomer Bulge: Dealing with the Stress of Demographic Change on Government Budgets in Canada

By William B.P. Robson

- Demographic change threatens to push the aggregate cost of Canada's current government programs for health, education, seniors and families from 15.0 to 19.4 percent of GDP over the next half-century.
- The discounted value of this implicit liability is $1.5 trillion – a burden borne by the provinces, with those in the eastern part of the country worst affected.
- Fiscal discipline, more tax room for provinces, partial prefunding of health programs and growth-friendly policies are all key elements in a strategy to secure demographically sensitive social programs in the future.

While the sagging economy is focusing attention on fiscal policy's capacity to fight a slump, another challenge looms – the demographic pressures on future program spending.[1] Short-term stimulus can only succeed if it preserves confidence in the long-run capacity of Canadian governments to provide programs and service their obligations at tolerable tax rates.

Notwithstanding reasonable budget balances going into the crisis, several measures show that governments are poorly prepared for the challenges ahead. The accumulated net debt in most public accounts shows potential saving already turned into consumption. Inadequately funded government-worker pensions and unfunded obligations of the Canada and Quebec Pension Plans use a slightly different language to tell a similar story. Potentially most important of all are the tabs governments face for age-related program spending in the future. These are implicit promises of services and transfer payments as the population ages that Canadians appear to be counting on, but have made no provision to pay for.

Demographic changes will strain age-sensitive public programs – healthcare, education, elderly and children's benefits – in Canada. While the responses to that strain are not yet known, we can anticipate their size by seeing what current patterns of age-sensitive spending imply for future tax rates. This *e-brief* assesses those current patterns of spending per person, and projects the shares of Canadian and provincial/territorial gross domestic product (GDP) they will require in the future.

Falling numbers of young people will reduce the claim of education and family programs on the economy far less than rising numbers of older people will increase the claim of healthcare. Discounted over 50 years, the net increase

1 This *e-brief* updates work most recently presented in Robson (2007), which discusses more fully the projection methodology and the interpretation of the results. I thank Robin Banerjee and Colin Busby for help with data and population projections, Alex Laurin and Finn Poschmann for data on senior and family programs, and James Fleming for editing. The conclusions and any errors are my responsibility.

represents an implicit liability for governments of $1.5 trillion. Perhaps surprisingly, Ottawa registers an implicit net asset. The provinces, however – which face the mounting healthcare bill – register a colossal liability.

These projections underline the dangers of incurring major new fiscal liabilities in the next few years. Even as they fight the slump, governments should prepare to prefund some health-related obligations, create more fiscal capacity for provinces, and support the income growth that Canada's social programs will depend on in the years ahead.

How Demographic Change Affects Government Program Costs

The measure of programs' sensitivity to changes in the age-structure of the population is straightforward. The first step is to make population projections resting on some middle-of-the-road assumptions.

FERTILITY RATES: Each province's rate stays at its 2006 level through the projection period.

LIFE EXPECTANCIES: Life expectancies at birth rise similarly to those in Statistics Canada's "medium" improvement projection.

MIGRATION: Net interprovincial migration in each age/sex category falls to zero over 10 years. Net international migration for each province in each category continues at the 2002–2006 average through the period.

Other calculations are made as follows. Real GDP is the product of each province's working-age population (18 to 64 years) times an index of real output per potential worker. The output indexes grow at the same rate as the equivalent national measure did from 1994 to 2007: 2.0 percent annually. Nominal GDP is real GDP times assumed inflation of 2 percent.

Program costs are projected for four major categories.

HEALTHCARE: Service costs for eight age-groups of each sex in each province[2] are projected assuming that service intensity per person rises with the productivity index: 2 percent annually. Cost inflation in healthcare continues at the pace recorded by the price index for government consumption from 1994 to 2007: 2.2 percent annually.

EDUCATION: Provincial spending[3] on elementary students is projected from provincial populations aged 4 to 17, and on postsecondary students from populations aged 18 to 24. Service intensity and costs, as with healthcare, grow at 2.0 and 2.2 percent annually. The population aged 18 to 24 and the index of service intensity drive federal grants to postsecondary students; the population up to 17 drives spending under the Canada Education Savings Grant.

ELDERLY BENEFITS: Federal benefits are projected by multiplying the population aged 65 and up by an index of inflation-adjusted benefits per person derived from projections from the Chief Actuary; provincial payments assume the same time-path of service or transfer intensity for their 65-and-up populations.[4]

CHILD/FAMILY BENEFITS: Spending on the federal Universal Child Care Benefit is projected from the national population of infants to age 5; spending on other child-related benefits is projected from relevant populations up to age 17. The former does not rise with inflation; the latter does.[5]

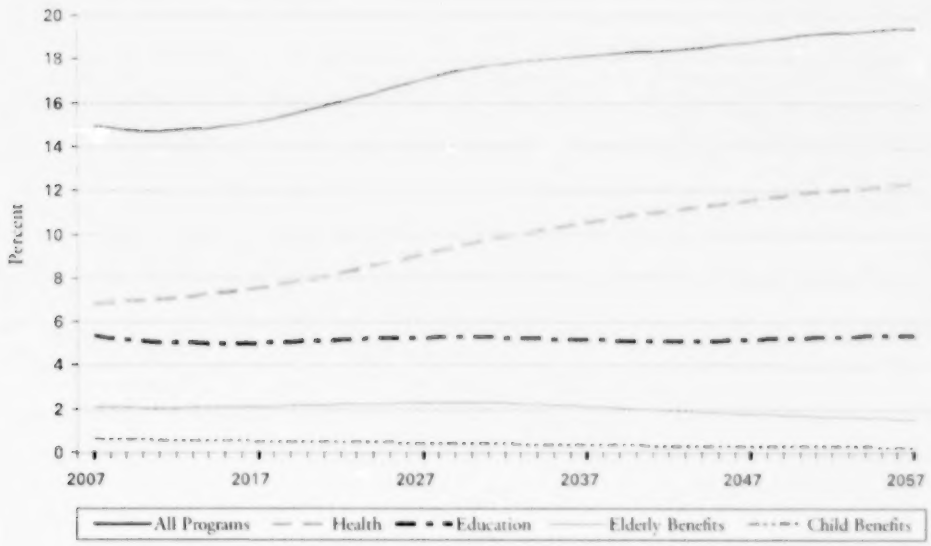
2 Base-year spending is prorated by age/sex group using the breakdowns from the Canadian Institute for Health Information (2008).

3 Combined provincial/local elementary and secondary education is from Statistics Canada (2008, 52-53).

4 See Office of the Chief Actuary (2008). Base-year provincial spending is from Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), Release 16 (responsibility for use and interpretation rests with the author).

5 Federal spending is from Receiver General for Canada (2008). Base-year provincial spending is from Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), Release 16 (responsibility for use and interpretation rests with the author).

Figure 1: Major Demographically Driven Program as Share of GDP: National Total



Source: Author's calculations as described in text.

The Results: Healthcare Overwhelms other Savings

Summing projected costs for each program across the country and comparing them to projected income growth suggests that demographic change will raise their total claim on GDP from 15.0 percent in 2007 to 19.4 percent in 2056 (Figure 1). Scaled to today's economy, that percentage-point increase represents a tax burden that is $68 billion – $3,100 annually per working-age person – higher than Canadians now pay for the same per-beneficiary program mix.

A convenient measure of the implicit assets and liabilities created by each program is the present value of the cumulative change in its claim on GDP over the next half-century. If a program's claim on income will fall, it is an implicit asset: a government could carry equivalent additional debt and still meet its other obligations without raising tax rates. If its claim on income will rise, it is an implicit liability: a government would need an equivalent nestegg of income-earning assets to meet its other obligations without raising tax rates. The national net liability of these programs – $1.5 trillion when discounted at a rate of 5.2 percent[6] – measures the gap between the expected per-recipient benefits of public programs and their apparent per-taxpayer cost, evaluated over the approximate average remaining lifetime of the average-aged Canadian.[7]

These assets and liabilities are unevenly distributed across the country. Table 1 shows them for provinces individually and collectively, and for Ottawa. The biggest numbers arise from aging's upward pressure on provincial health budgets: an aggregate liability of almost $1.9 trillion, with the eastern provinces facing the tougher challenge.

While differing near-term trends vary the picture from province to province, declining student-age populations generally create a modest net asset in education spending. Elderly benefits figure only slightly: their claim on GDP rises slowly and temporarily.

6 The yield on a long-term government of Ontario bond in December 2008.

7 This total exceeds the $1.4 trillion calculated in similar fashion in Robson (2007). Interaction among various factors precludes an additive breakdown of contributions to the change. Program changes account for small increases. The biggest upward force is simply the passage of time, which puts more of the potential savings for education budgets from declining student populations into the past, and brings closer the period when the aging babyboom's pressure on healthcare costs is most acute. A factor reducing the total is the provincial bond yield used as a discount rate: 5.2 percent compared to 4.8 percent at the time of the previous study. A 4.8 percent discount rate applied to these projections would have yielded a net liability exceeding $1.7 trillion.

Table 1: Demographically Driven Implicit Assets and Liabilities ($billion except as noted)

	Health	Education	Elderly Benefits	Child/Family Benefits	All Programs	All Programs as % of 2007 GDP
Nfld. & Lab.	-40.9	1.9	-0.1	0.1	-39.0	-131
PEI	-6.9	0.4	–	–	-6.6	-140
Nova Scotia	-55.7	3.3	–	0.2	-52.2	-152
New Brunswick	-44.8	2.1	-0.1	0.1	-42.6	-156
Quebec	-431.5	-17.4	–	–	-448.9	-145
Ontario	-726.3	67.5	0.1	5.3	-653.3	-107
Manitoba	-44.4	-2.1	0.0	0.1	-46.3	-92
Saskatchewan	-31.7	-0.9	0.0	–	-32.6	-61
Alberta	-222.2	-16.1	0.8	0.9	-236.7	-86
BC	-234.5	13.6	0.0	0.4	-220.5	-111
Yukon	-5.4	0.0	–	–	-5.4	-307
NWT & Nunavut	-14.3	0.	–	–	-13.6	-220
Provincial/Territorial Total	-1,858.6	53.0	0.8	7.1	-1,797.8	-112
Federal	--	14.6	64.0	222.9	301.5	19
Canada Total	-1,858.6	67.6	64.8	229.9	-1,496.3	-94

Sources: Author's calculations as described in text.

since the tax base should outgrow price-indexed programs over time. Demography and program characteristics make child-related benefits a net asset, though Ottawa is the only government affected on any scale.

Summary and Implications

Although many Canadians and policymakers know that demographic change will strain Canada's public programs, the force of the coming pressure is still underappreciated. Those conscious of the challenge ahead might urge governments to consider several courses.

- Restrain the chronic over-shooting of budget targets (Busby and Robson 2008) that has left governments facing deficits rather than smaller surpluses in a downturn.
- Contain costs in health and education. Holding inflation in those sectors to the same 2 percent rate assumed economy-wide in these projections would reduce the net implicit liability by more than one-third.
- Lay the ground for further tax relief from Ottawa. Desirable in its own right, this would create more room for the revenue raising – preferably through consumption taxes, which are more robust to aging – that provinces will need over time.
- Partially prefund some healthcare programs where demographically driven cost escalation will be especially severe, such as drugs and long-term care.
- Make long-term growth friendliness a key criterion for evaluating all economic policies. If servicing intensity in health and education rose at the 2 percent rate assumed here, but annual growth of output per potential worker was higher by 0.6 percent, the net national liability would vanish entirely.

Whatever Canadians' short-term wants and needs, the fiscal obligations inherent in demographic change are large, and no longer very far in the future. The fiscal discipline, funding reforms and growth-friendly policies that would help the country meet them are equally pressing responses.

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William B.P. Robson is President and Chief Executive Officer of the C.D. Howe Institute.

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